

REMARKS

Applicants appreciate the Examiner's thorough consideration provided the present application. Claims 1-14 are present in the application. Claims 2 and 7 have been amended and claims 11-14 have been added. Claims 1, 2, 6 and 7 are independent. By this Amendment, no claims have been amended. Reconsideration of this application, as amended, is respectfully requested.

Allowable Subject Matter

Claims 2-4 and 7-9 have been indicated by the Examiner as being directed to allowable subject matter. Applicants greatly appreciate this indication by the Examiner.

As the Examiner will note, claims 2 and 7 have been rewritten in independent form, including all of the subject matter of dependent claims 1 and 6, respectively. In addition, claims 3, 4, 8 and 9 depend from claims 2 and 7, respectively. Therefore, claims 2-4 and 7-9 should be in condition for allowance.

Rejection Under 35 U.S.C. § 103

Claims 1, 5, 6 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hamzy, U.S. Patent No. 6,623,527 in view of Maruta et al., U.S. Patent No. 6,064,838. This rejection is respectfully traversed.

The present invention is directed to a distributed document handling system for carrying out jobs. Independent claim 1 recites a combination of elements including "specifying means for entering by a user a job specification comprising product specifications specifying the product to be delivered by the job ..." and "determining means for determining a path of services, a path comprising at least two services, the services being selected from the pool of services, wherein the path is suitable to carry out the job in accordance with the product specifications ..."

Independent claim 6 recites a combination of elements including "a specifying device, a user entering a job specification through the specifying device in considering selection from the pool of services, a job specification comprising product specifications specifying the product to be delivered by the job ..." and "a determining device that determines a path of services, a path comprising at least two services, the services being selected from the pool of services, wherein the path is suitable to carry out the job in accordance with the product specifications ...". Applicants respectfully submit that independent claims 1 and 6 define the present invention over the references relied on by the Examiner.

Hamzy is directed to manipulating an html file for inclusion of a button (see column 9, line 30), with which a service provided over the network can be accessed. Examples of services in this respect are: a print service, a fax service (see column 8, line 15) and an archival service (see column 9, line 18).

The primordial distinction of the present invention over Hamzy is that Hamzy does not disclose in any way a path of services. A path of services is an important element of the present invention. The Examiner has considered the path through a data communication network as disclosed in Fig. 2 of Hamzy to be the path of services according to the present invention as depicted in Fig. 2 of the present application.

It is noted that the Examiner states in item 10 of the communication that "during patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification". Applicant agrees with this position of the Examiner. However, the notion of a "path of services" as denoted in the claims is explicitly defined in the description at paragraph [0001] of the publication of the present application (see U.S. Application Publication No. 2002/0073132). Specifically, in order to be "a path of services" there must be more than one service in the path. This is particularly recited in the independent claims, since it is stated "a path comprising at least two services."

In Hamzy, there is more than one service; however, they are not on the same path. In Hamzy, if a particular job is to include a print service, a fax service and an archive service, each service must be performed along different paths. In other words, each "path" is a single service and therefore not a "path of services" as in the presently claimed invention.

Referring to the Examiner's Office Action, the Examiner states "a pool of services (list of selectable services), the services being distributed over a number of interconnected processing devices (Fig.2, items 113, 101, 111, col 13, lines 46-49)." It is clear that the system according to the present invention is distinct from the disclosure of Hamzy.

The list of selectable services in Hamzy are a print service, a fax service (8/15) and an archival service (see column 9, line 18). The other services, if any, are fixed: neither the user, nor "the system" is able to choose other services (and the system disclosed in Hamzy is also not aiming in performing multiple services on a path as in the presently claimed invention). Indeed, there are disclosed a number of interconnected processing devices in Hamzy, but they are not a path of services as in the present application.

With reference to the quote by the Examiner from claim 44 of Hamzy (see column 13, lines 46-49), wherein is stated: "means for determining network service information including a list of selectable services in a network and a network path to each of a set of network service providers; .." Applicants respectfully submit that the list of selectable services disclosed in Hamzy is simply a list with a print service, a fax service (see column 8, line 15) and an archival service (see column 9, line 18). In addition, in Hamzy, *a network path* is determined for each of these services (the latter is necessary to be able to access the service from the client upon selection). A network path is not the same as the path of services according to the present invention.

Thus, Hamzy discloses offering to the user three services and a path through a physical network towards these services in order to be able to access or invoke the service. There are several differences between the Hamzy disclosure and the presently claimed invention:

- 1). In the disclosure of Hamzy, it is the user that selects a service, while in the present application it is the system that selects the service (after the user has entered the job specification, the system determines the path of services).
- 2). In the disclosure of Hamzy, a path is a path through a network to a service, while in the present application, a path is a sequence of services, period. Most of the time, some services may be provided on the same computer, so in that case there is not even a path through a network, but there is a path from one service to another. However, if services are provided on different computers, then there will be an underlying path through a network, but that is a different path from the path as the sequence of services as in the presently claimed invention.

It is noted again that in the present application at page 1, paragraph [0001], it is stated that the term "path of services" is used to denote the set of services that are involved in realizing the requested job according to product specifications. Also reference is made to paragraph [0026] where it is stated that the application services involved form a path in a digraph according to which it is determined at which moment in the processing of a job an application service is next.

Trying to identify a path of services according to the present invention in the embodiments disclosed in Hamzy reveals that there is just one service (being e.g. the printing service, if according to the specification of the user the document has to be printed). There is not really a notion of a path since it is just one service and not a sequence of services; so there is also not a service next in this respect.

In view of the above, Hamzy falls short from disclosing what is the inventive subject matter according to the present application.

Maruta and - Hamzy in combination with Maruta

With regard to the Examiner's reliance on Maruta, this reference discloses:

- 1). identifying printing costs in advance;
- 2). occasionally altering the printing mode in order to satisfy an intended amount (column 2, line 50); and
- 3). a printing system that is connected via a network to a terminal of the user.

Networked are a user side data processor, a center side data processor and a printer (see column 3, line 60). These show similarities with the nodes in the present application, however they are different from these. In mapping Maruta on a system according to the present invention, the printer maps on one service node, together with cost calculation for that one printer (in dependence of the job spec).

At column 9, line 10 of Maruta it is described how cost calculation is carried out: after a prescan, a total sum is calculated and shown to the user on a display, whereupon the user is able to modify the job or to initiate the intact copy job. Also, for a networked printer, a similar situation is disclosed (see column 17, lines 10-21).

Hamzy does not disclose a path of two or more services, and neither does Maruta. Hamzy discloses *a network* path towards one service that is selectable by a user (print service, fax service or archiving service). A combination of Hamzy and Maruta discloses that printing costs can be identified in advance for that one service, and that the user may modify the job. What is missing in the combination of Hamzy and Maruata is the measure, that more services (be it in sequence or parallel) are involved that all have to be executed in order to realize the job specified by the user.

In order to demonstrate the advantages of this outstanding measure according to the present invention, the following example is provided for the Examiner's consideration:

Suppose the situation of a CAD file that has to be printed on a machine only capable of printing jpeg files. According to the present invention, a path will be made of a conversion service (A) to convert the CAD file (.dwg) to the jpeg format (.jpg) and a jpeg printing service (B) (supposing that these services are available in the pool of services). Let us indicate this path with (A) - (B). Also a conversion service (C) is available for conversion from the .dwg format to the .png format and also a conversion service (D) is available for conversion from the .png format to the .jpg format. So the system according to the present invention will also provide now a path along the services (C) - (D) - (B). In case now that service (A) is very slow and services (C) and (D) are fast and a time constraint is defined for the job, the user may select the path (C) - (D) - (B) for carrying out the job.

The crux of the present invention is that constraints for all involved services, along a path, are taken into account, and costs of alternative paths are compared. Thus, not constraints for a single service on its own are evaluated and compared as disclosed in a combination of Hamzy and Maruta. The present invention transcends far above what is disclosed in a combination of Hamzy and Maruta. For example, where at first sight services seems to be contraproductive, but looking integrally over a whole path the combination is preferred.

This leads to advantages not obtainable by the combination of Hamzy and Maruta. Therefore, independent claims 1 and 6 are non-obvious over these references.

With regard to dependent claims 5 and 10, Applicants submit that these claims are allowable due to their respective dependence on independent claims 1 and 6, as well as due to the additional recitations in these claims.

In view of the above remarks, Applicants respectfully submit that claims 1, 5, 6 and 10 clearly define the present invention over the references relied on by the Examiner.

Reconsideration and withdrawal of the Examiner's rejection under 35 U.S.C. § 103 are therefore respectfully requested.

Additional Claims

Additional claims 11-14 have been added for the Examiner's consideration. Applicants respectfully submit that these claims are allowable due to their respective dependence on independent claims 1 and 6, as well as due to the additional recitations in these claims.

Favorable consideration and allowance of additional claims 11-14 are respectfully requested.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Paul C. Lewis, Reg. No. 43,368, at (703) 205-8000 in the Washington, D.C. area.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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